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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,324	01/22/2002	Neal J. Miller	Miller 01-01	8874
22823	7590	04/13/2004	EXAMINER	
STEPHEN A GRATTON THE LAW OFFICE OF STEVE GRATTON 2764 SOUTH BRAUN WAY LAKEWOOD, CO 80228			COOLEY, CHARLES E	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/051,324	Applicant(s) MILLER ET AL.	
	Examiner Charles E. Cooley	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8,10-17,19-25 and 27-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8,10-17,19-25 and 27-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 3-6, 8, 10-17, 19, 22-25, and 27-32 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by the document "Fuzzy and Probabilistic Control Techniques Applied to Problems of the Chemical Process Industries" dated July 2001.

This document clearly discloses the claimed subject matter, particularly at pages 23-118 and 349-351. The filter is disclosed beginning at page 54. The feed forward controller is disclosed beginning at page 66. The fuzzy soft sensor is disclosed beginning at page 80. The conflict resolution portion is disclosed beginning at page 111.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3-5, 12-17, 19, 22-25, and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable the article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" dated May 1998 in view Giebeler et al. (US 4,700,117), Elgersma et al. (US 5,561,993), or Evans, III et al. (US 6,635,007).

This article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" dated May 1998 clearly discloses a system and method for separating a mixture using a centrifuge including a rotatable bowl and auger (under the section "CENTRIFUGE SYSTEM" and as seen in Fig. 1) with a fuzzy logic control means including the step of providing a centrifuge being disclosed on pages 2-3 and in Fig. 1; the fuzzy logic controller and its functions are disclosed on page 3; the heating, pumping, separating, conveying, and sensing steps are disclosed on page 2; the providing a set of rules is disclosed on pages 2-3; and adjusting the feed temperature and feed rate using the fuzzy logic controller and set of rules is disclosed on pages 3-5 and in Figure 4. The article does not disclose the use of filter in the control system or method. Each of the patents to Giebeler et al. (US 4,700,117 – see Figure 1), Elgersma et al. (US 5,561,993 – see Figures 2 and 8), or Evans, III et al. (US 6,635,007 – see Figures 1 and 2)

discloses a rotatable centrifuge or rotor system and method with a control system governing operation of the centrifuge or rotor system. The respective control systems and methods of operation each include a filter for filtering signals through the control system. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have provided the centrifuge system and method of the article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" with a filter and the resultant step of filtering signals as disclosed by either Giebeler et al., Elgersma et al., or Evans, III et al. for the purpose of filtering out unwanted noise in the control system (Giebeler et al.: see col. 5, lines 21-24) or for eliminating noise from the sensor signals to extract only the desired signals and ignore unwanted signals (Elgersma et al.: col. 17, line 57 through col. 18, line 26 and col. 18, line 49 through col. 19, line 47) or to provide a filtered signal to a controller to select the desired frequencies in a signal from a sensor such that a particular condition can be sensed (Evans, III et al.: col. 5, lines 30-52 and col. 6, lines 26-38).

6. Claims 1, 3-5, 12-17, 19, 22-25, and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable the article "A Fuzzy Control System for a Three-Phase Oil Field Centrifuge" dated August 1998 in view Giebeler et al. (US 4,700,117), Elgersma et al. (US 5,561,993), or Evans, III et al. (US 6,635,007).

This article "A Fuzzy Control System for a Three-Phase Oil Field Centrifuge" dated August 1998 discloses a system and method for separating a mixture using a centrifuge including a rotatable bowl and auger (under the section (2) and as seen in Fig. 1) with a fuzzy logic control means including the step of providing a centrifuge being

disclosed on page 2 and in Figs. 1-2; the fuzzy logic controller and its functions are disclosed on page 2; the heating, pumping, separating, conveying, and sensing steps are disclosed on page 2; the providing a set of rules is disclosed on pages 3-4; and adjusting the feed temperature and feed rate using the fuzzy logic controller and set of rules is disclosed on pages 4 and in Figure 5. The article does not disclose the use of filter in the control system or method. Each of the patents to Giebeler et al. (US 4,700,117 – see Figure 1), Elgersma et al. (US 5,561,993 – see Figures 2 and 8), or Evans, III et al. (US 6,635,007 – see Figures 1 and 2) discloses a rotatable centrifuge or rotor system and method with a control system governing operation of the centrifuge or rotor system. The respective control systems and methods of operation each include a filter for filtering signals through the control system. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have provided the centrifuge system and method of the article article "A Fuzzy Control System for a Three-Phase Oil Field Centrifuge" with a filter and the resultant step of filtering signals as disclosed by either Giebeler et al., Elgersma et al., or Evans, III et al. for the purpose of filtering out unwanted noise in the control system (Giebeler et al.: see col. 5, lines 21-24) or for eliminating noise from the sensor signals to extract only the desired signals and ignore unwanted signals (Elgersma et al.: col. 17, line 57 through col. 18, line 26 and col. 18, line 49 through col. 19, line 47) or to provide a filtered signal to a controller to select the desired frequencies in a signal from a sensor such that a particular condition can be sensed (Evans, III et al.: col. 5, lines 30-52 and col. 6, lines 26-38).

7. Claims 20-21 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" dated May 1998 in view of Giebeler et al. (US 4,700,117), Elgersma et al. (US 5,561,993), or Evans, III et al. (US 6,635,007) or the article "A Fuzzy Control System for a Three-Phase Oil Field Centrifuge" dated August 1998 in view of Giebeler et al. (US 4,700,117), Elgersma et al. (US 5,561,993), or Evans, III et al. (US 6,635,007) as applied to claims 15 and 29 above, and further in view of Davis (US 5,499,586).

The article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" dated May 1998 in view of Giebeler et al. (US 4,700,117), Elgersma et al. (US 5,561,993), or Evans, III et al. (US 6,635,007) or the article "A Fuzzy Control System for a Three-Phase Oil Field Centrifuge" dated August 1998 in view of Giebeler et al. (US 4,700,117), Elgersma et al. (US 5,561,993), or Evans, III et al. (US 6,635,007) each disclose the collecting tank but do not disclose the vapor recovery system. Davis discloses a vapor recovery system for use in the Chemical Processing Industry comprising a vapor recovery unit 18 with a fan and baffles 120. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have provided the systems and methods disclosed by the article "A Fuzzy Controlled Three-Phase Centrifuge for Waste Separation" in view of Giebeler et al., Elgersma et al., or Evans, III et al. or the article "A Fuzzy Control System for a Three-Phase Oil Field Centrifuge" in view of Giebeler et al., Elgersma et al., or Evans, III et al. with a vapor recovery system as taught by Davis for the purpose of recovering

substances from the exhaust gases formed during the processing of the materials (col. 6, line 37 through col. 7, line 12).

8. Claims 20-21 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the document "Fuzzy and Probabilistic Control Techniques Applied to Problems of the Chemical Process Industries" dated July 2001 in view of Davis (US 5,499,586).

The document "Fuzzy and Probabilistic Control Techniques Applied to Problems of the Chemical Process Industries" dated July 2001 discloses the collecting tank but does not disclose the vapor recovery system. Davis discloses a vapor recovery system for use in the Chemical Processing Industry comprising a vapor recovery unit 18 with a fan and baffles 120. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have provided the systems and methods disclosed by the document "Fuzzy and Probabilistic Control Techniques Applied to Problems of the Chemical Process Industries" with a vapor recovery system as taught by Davis for the purpose of recovering substances from the exhaust gases formed during the processing of the materials (col. 6, line 37 through col. 7, line 12).

Response to Amendment

1. Applicant's arguments filed 23 JAN 2004 have been fully considered but they are not persuasive.

2. The affidavit filed on 23 JAN 2004 under 37 CFR 1.131 has been considered but is ineffective to overcome the document "Fuzzy and Probabilistic Control Techniques Applied to Problems of the Chemical Process Industries" dated July 2001.

The affidavit is insufficient to establish diligence from a date prior to the date of reduction to practice of the document "Fuzzy and Probabilistic Control Techniques Applied to Problems of the Chemical Process Industries" to either a constructive reduction to practice or an actual reduction to practice. Sections (1-3) of the affidavit merely set forth information regarding the joint inventors. Section (4) of the affidavit sets forth the origin of the document. Section (5) is not convincing as the instant application is denoted as a Continuation-in-Part of the prior application 09/357,339. Consequently, since this application repeats some, but certainly not all of the subject matter set forth in the parent application, much of the claimed subject matter is not entitled to the effective filing date of the parent application and simply has an effective filing date equal to the filing date of the instant application (see MPEP 706.02). Section (6) of the affidavit is considered a generic statement that fails to provide sufficient evidence that the instant invention was reduced to practice prior to the effective date of the document (July 2001). Chapter 2.2 of the document mentioned in section (6) of the affidavit discloses a date of 1994 with regard to the control system for the centrifuge but this passage provides no compelling evidence that the claimed invention was reduced to practice at this time. The first paragraph on page 29 of the document refers to a more advanced version of the control system but fails to support that the claimed

invention was reduced to practice prior to the effective date of the document (July 2001).

Accordingly, the affidavit fails to clearly explain which facts or data applicant is relying on to show completion of his or her invention prior to the particular date. The vague and general statements in broad terms about what the evidence describes along with a general assertion that the evidence describes a reduction to practice (see sections (5) and (6) of the affidavit) "amounts essentially to mere pleading, unsupported by proof or a showing of facts" and, thus, does not satisfy the requirements of 37 CFR 1.131(b). *In re Borkowski*, 505 F.2d 713, 184 USPQ 29 (CCPA 1974). Applicant must give a clear explanation of the exhibits pointing out exactly what facts are established and relied on by applicant. 505 F.2d at 718-19, 184 USPQ at 33. See also *In re Harry*, 333 F.2d 920, 142 USPQ 164 (CCPA 1964) (Affidavit "asserts that facts exist but does not tell what they are or when they occurred.").

The affidavit does not comply with 37 CFR 1.131(b) because the required showing of facts and exhibits which form part of the affidavit are lacking from the submission (see 37 CFR 1.131 and MPEP 715.07). As noted above, the affidavit presents general statements that the claimed invention antedates the July 2001 date of the document applied under 35 USC 102(a). A general allegation that the invention was completed prior to the date of the reference is not sufficient. *Ex parte Saunders*, 1883 C.D. 23, 23 O.G. 1224 (Comm'r Pat. 1883). Similarly, a declaration by the inventor to the effect that his or her invention was conceived or reduced to practice prior to the reference date, without a statement of facts demonstrating the correctness of this

conclusion, is insufficient to satisfy 37 CFR 1.131. 37 CFR 1.131(b) requires that original exhibits of drawings or records, or photocopies thereof, accompany and form part of the affidavit or declaration or their absence satisfactorily explained.

For these reasons, the evidence filed 23 JAN 2004 is therefore wholly inadequate to overcome the document "Fuzzy and Probabilistic Control Techniques Applied to Problems of the Chemical Process Industries" dated July 2001 applied against the claims under 35 USC 102(a). Further evidence filed subsequent to this final rejection will not be considered timely per MPEP 715.09.

Applicant believes the amended claims are allowable in view of the limitations added to the claims regarding a filter or steps of filtering or differentiating noise from signals. As clearly evidenced by the patents to Giebeler et al. (US 4,700,117), Elgersma et al. (US 5,561,993), or Evans, III et al. (US 6,635,007), the recited filter or steps of filtering or differentiating noise from signals is a well known and therefore obvious concept in control circuits implemented in centrifuge and rotatable rotor systems. Such limitations thus fail to define the amended claims over the prior art.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley whose telephone number is (571) 272-1139. The examiner can normally be reached on Mon-Fri. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Charles" followed by a stylized flourish.

Charles E. Cooley
Primary Examiner
Art Unit 1723

8 April 2004